SEQUENCE LISTING

```
<110> Kessler, Christoph
      Haberhausen, Gerd
      Bartl, Knut
      Orum, Henrik
#120> SPECIFIC AND SENSITIVE METHOD FOR DETECTING NUCLEIC ACIDS
<130> 4817/0Q
<140> PCT/EP98/06952
<141> 1998-11-03
<160> 95
<170> PatentIn Version 3.1
<210> 1
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 1
                                                                    24
gcagaaagcg tctagccatg gcgt
<210> 2
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<400> 2
                                                                    24
ctcgcaagca ccctatcagg cagt
<210> 3
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<400> 3
                                                                    20
agtatgtgtg tcgtgcagcc
<210> 4
<211> 18
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
4400\times 4
```

```
tggctctccc gggagtgg
                                                                     18
 <210> 5
 <211> 12
< <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: probe
 <400> 5
                                                                     12
 ctccaggacc cc
 <210> 6
 <211> 48
 <212> DNA
 <213> HCV
 agtatgagtg tcgtgcagcc tccaggaccc ccctcccgg gagagcca
                                                                     48
 <210> 7
 <211> 48
 <212> DNA
 <213> Homo sapiens
 <400> 7
 agtatgtgtg tcgtgcagcc tccaggaccc ccactcccgg gagagcca
                                                                     48
 <210> 8
 <211> 59
 <212> DNA
 <213> HCV
 <400> 8
 gtactgcctg atagggtgct tgcgagtgcc ccgggaggtc tcgtagaccg tgcaccatg 59
 <210> 9
 <211> 59
 <212> DNA
 <213> HGBV-B
 gtactgcctg atagggtcct tgcgagggga tctgggagtc tcgtagaccg tagcacatg 59
 <210> 10
 <211> 19
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: amplification primer
 <400 > 10
 ccaggacccc cactoccgg
                                                                     19
 <210> 11
 <211> 20
```

<212> DNA <213> Artificial Sequence <223> Description of Artificial Sequence: amplification primer <400> 11 tockggasco ccactoccgg 20 <210> 12 <211> 16 <212> DNA <213> Artificial Sequence <223> Description of Artificial Sequence: amplification primer <400> 12 ccaggacccc cactcc 16 <210> 13 <211> 48 <212> DNA <213> Artificial Sequence <223> Description of Artificial Sequence: amplification primer agtatgagtg tcgtgcagcc tccaggcccc ccctcccgg gagagcca 48 <210> 14 <211> 22 <212> DNA <213> Artificial Sequence <223> Description of Artificial Sequence: amplification primer <400> 14 gtgtgtcgtg cagcctccag ga 22 <210> 15 <211> 17 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: amplification primer <400> 15 tcgtgcagcc tccagga 17 <210> 16 <211> 18 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: amplification primer

```
₹400> 16
                                                                    18
ccactcccgg gagagcca
<210> 17
<211> 21
4010> DNA
<2213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 17
                                                                    21
cgtactgcct gatagggtgc t
<210> 18
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<400> 18
                                                                    23
gmatgtgcta mggtmtamga gac
<210> 19
<211> 21
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 19
                                                                    21
cgtactgcct gatagggttg c
<210> 20
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 20
                                                                    23
gmatgtgmta mggtmtamga gac
<210> 21
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<221> modified base
<222> 11,19
<223> n=i
```

```
<400> 21
                                                                     21
 egtactgeet natagggtne t
 <210> 22
· <211> 23
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: amplification primer
 <220>
 <221> modified base
 <222> 19
 <223> n=i
 <400> 22
                                                                     23
 gmatgtgmta mggtmtdmnd gdc
 <210> 23
 <211> 20
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: amplification primer
 <220>
 <221> modified base
 <222> 11,19
 <223> n=i
 <400> 23
 cgtactgcct natagggtnc
                                                                     20
 <210> 24
 <211> 21
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: amplification primer
 <220>
 <221> modified base
 <222> 11,19
 <223> n=i
 <400> 24
 cgtamtgmmt natagggtnm t
                                                                     21
 <210> 25
 <211> 23
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: amplification primer
 <220>
 <221> modified base
```

```
<222> 19
 <223 : n=i
 <2200>
 <021> modified base
1 <2225 6,8,9
 <223> n=p
 <400> 25
                                                                     23
 gmatgnknna mggtmtdmnd gdm
 <210> 26
 <211> 20
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: amplification primer
 <220>
 <221> modified base
 <222> 11,19
 <223> n=i
 <400> 26
 cgtamtgmmt natagggtnm
                                                                     20
 <210> 27
 <211> 26
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: amplification primer
 <400> 27
 gcatgtgcta cggtctacga gacttc
                                                                     26
 <210> 28
 <211> 21
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: amplification primer
 <220>
 <221> modified base
 <222> 11,19
 <223> n=i
 <400> 28
                                                                     21
 cgtamtgmmt natagggtnc t
 <110> 29
 <211> 26
 <212> DNA
 <213> Artificial Sequence
```

```
<220>
<223> Description of Artificial Sequence: amplification primer
<2200>
<221> modified base <222> 19
<223> n=i
<400> 29
                                                                      26
gmatgtgmta mggtmtdmnd gdmttc
<210> 30
<211> 20
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<220>
<221> modified base <222> 11,19
<223> n=i
<400> 30
                                                                      20
cgtamtgmmt natagggtnc
<210> 31
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<220>
<221> modified base
<222> 19
<223> n=i
<220>
<221> modified base
<222> 24
<223> n=p
<400> 31
                                                                      26
gmatgtgmta mggtmtdmnd gdmntc
<210> 32
<211> 26
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<220>
<221> modified base <222> 19
```

```
<223> n=i
<:220>
<221> modified base
<222> 6,8,9
<223> n=p
<400> 32
                                                                    26
gmatgnknna mggtmtdmnd gdmdtm
<210> 33
<211> 18
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 33
cgtamtgmmt gatagggt
                                                                    18
<210> 34
<211> 27
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 34
gcatgtgcta cggtctacga gacttcc
                                                                    27
<210> 35
<211> 18
<212> DNA
<213> Artificial Sequence
<220>
<223> amplification primer
<220>
<221> modified base
<222> 11
<223> n=i
<400> 35
                                                                    18
cgtamtgmmt natagggt
<210> 36
<211> 27
<212> DNA
<213> Artificial Sequence
< 220 >
<223> Description of Artificial Sequence: amplification primer
< 220>
<221> modified base
<222> 13,19
<223> n=i
```

```
<400> 36
                                                                      27
 gmatgtgmta mgntmtamna gamttmc
 <210> 37
: <211> 17
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: amplification primer
 <220>
 <221> modified base <222> 19
 <223> n=i
 <220>
 <221> modified base
 <222> 24
 <223> n=p
 <400> 37
 gmatgtgmta mggtmtamna gamntmc
                                                                      27
 <210> 38
 <211> 27
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: amplification primer
 <220>
 <221> modified base
 <222> 19
 <223> n=i
 <220>
 <221> modified base
 <222> 24
 <223> n=p
 <400> 38
 gmatgtgmta mggtmtamna gamntmm
                                                                      27
 <210> 39
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: amplification primer
 <220>
 <221> modified base
 <2225 11
 <223> n=i
 <400> 39
 cgtdmtgmmt ndtdgggt
```

18

```
<2105 40
<211 - 27
4312 - ENA
<213 Artificial Sequence
4:220 ·
<223: Description of Artificial Sequence: amplification primer
<220:
<221> modified base
<222>13,19
<223> n=i
<220>
<221> modified base
<222> €,8,9,24
<223> n=p
<400> 40
                                                                     27
gmatgnknna mgntmtamna gamntmc
<210> 41
<211> 27
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<220>
<221> modified base
<222> 19
<223> n=i
<220>
<221> modified base
<222> 6,8,9,24
<223> n=p
<400> 41
                                                                     27
gmatgnknna mggtmtamna gamntmm
<210> 42
<211> 27
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 42
                                                                     27
gcatgtgcta cggtctgcga gaactcc
<210> 43
<211> 27
<212: DNA
<213> Artificial Sequence
<220>
<223 - Description of Artificial Sequence: amplification primer</p>
```

```
<220>
<221> modified base
4222× 17
<223> n=i
<400> 43
                                                                     27
gmatgtgmta mggtmtnmga gaamtmc
<210> 44
 <211> 27
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: amplification primer
 <220>
 <221> modified base
 <222> 17
 <223> n≈i
 <400> 44
 gmatgtgmta mggtmtnmga gakmtmc
                                                                     27
 <210> 45
 <211> 27
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: amplification primer
 <220>
 <221> modified base
 <222> 17
 <223> n=i
 <220>
 <221> modified base
 <222> 6,8,9
 <223> n=p
 <400> 45
 gmatgnknna mggtmtnmga gakmtmm
                                                                     27
 <210> 46
 <211> 27
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: amplification primer
<400> 46
                                                                     27
gcatgtgcta cggtctgcga ggactcc
 <210: 47
 <2115 27
```

```
<212> DNA
<213: Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<220%
<2221> modified base
<222> 17
<223> n=i
<400> 47
                                                                    27
gmatgtgmta mggtmtnmga ggamtmc
<210> 48
<211> 27
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<220>
<221> modified base
<222> 17
<223> n=i
<400> 48
                                                                    27
gmatgtgmta mggtmtnmga gkkmtmc
<210> 49
<211> 27
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<220>
<221> modified base
<222> 17
<223> n=i
<220>
<221> modified base
<222> 6,8,9
<223> n=p
<400> 49
                                                                    27
gmatgnknna mggtmtnmga gkkmtmm
<210> 50
<211> 30
<212> DNA
<213> Artificial Sequence
< 2.20 >
<223> Description of Artificial Sequence: amplification primer
                                                                    30
agttggagga catcaagcag ccatgcaaat
```

```
<210> 51
<211> 27
<212> DNA
<213> Artificial Sequence
<203> Description of Artificial Sequence: amplification primer
<400> 51
                                                                    27
tgctatgtca gttccccttg gttctct
<210> 52
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<400> 52
                                                                    20
atcaatgagg aagctgcaga
<210> 53
<211> 32
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<400> 53
gagacaccag gaattagata tcagtacaat gt
                                                                    32
<210> 54
<211> 33
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 54
ctaaatcaga tcctacatat aagtcatcca tgt
                                                                    33
<210> 55
<211> 35
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
                                                                    35
ccacaaggat ggaaaggatc accagctata ttcca
<210> 56
<211> 23
<:212> DNA
<213> Artificial Sequence
```

```
k220.5
«223» Description of Artificial Sequence: amplification primer
<400.56
                                                                    23
tgtaccagta aaattaaago cag
<2105 57
<2115 20
<2112> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<400> 57
ggccattgtt taacttttgg
                                                                    20
<210> 58
<211> 13
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: probe
<400> 58
                                                                    13
aggaatggat ggc
<210> 59
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<400> 59
                                                                    20
tacctggcat gggtaccagc
<210> 60
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<400> 60
                                                                    26
gactaattta tctacttgtt catttc
<210> 61
<211> 18
<212> DNA
<213> Artificial Sequence
<220h
<223> Description of Artificial Sequence: probe
<400> 61
cacacaaagg aattggag
                                                                    18
```

```
<210 > 62
<211: 20
<210+ DNA
<213> Artificial Sequence
«D23» Description of Artificial Sequence: amplification primer
<400> 62
tttggaatte cetacaatee
                                                                     20
<210> 63
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<400> 63
aattctttat tcatagattc tactac
                                                                     26
<210> 64
<211> 15
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: probe
<400> 64
                                                                    15
cccaaagtca aggag
<210> 65
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 65
tcaaaatttt cgggtttatt acag
                                                                    24
<210> 66
<211> 20
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 66
                                                                    20
agctttgctg gtcctttcca
<210> 67
<211> 19
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> Description of Artificial Sequence: probe
4400> 67
ggacagcaga aatccactt
                                                                    19
<210> 68
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 68
ggaaaaggtc tatctggcat gggt
                                                                    24
<210> 69
<211> 28
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 69
actaatttat ctacttgttc atttcctc
                                                                    28
<210> 70
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: probe
<400> 70
                                                                    20
accagcacac aaaggaattg
<210> 71
<211> 26
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 71
gcaactagat tgtacacatt tagaag
                                                                    26
<210> 72
<211> 25
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 72
                                                                    25
cttctatata tccactggct acatg
```

```
<210> 73
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: probe
<400> 73
                                                                    23
gaaaagttat cctggtagca gtt
<210> 74
<211> 18
<212> ENA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 74
ggagtgtgga ttcgcact
                                                                    18
<210> 75
<211> 18
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<400> 75
tgagatcttc tgcgacgc
                                                                    18
<210> 76
<211> 20
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: probe
<400> 76
                                                                    20
agaccaccaa atgcccctat
<210> 77
<211> 17
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 77
                                                                    17
ccaccaaatg cccctat
<210> 78
<211> 18
<212> DNA
<213> Artificial Sequence
```

```
<220b
<223> Description of Artificial Sequence: amplification primer
<4005 78
eccgtcgtct aacaacag
                                                                    18
<210: 79
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: probe
<400> 79
cttatcaaca cttccggaaa cta
                                                                    23
<210> 80
<211> 17
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 80
gcggggtttt tcttgtt
                                                                    17
<210> 81
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: amplification primer
<400> 81
tctagactct gcggtattgt g
                                                                    21
<210> 82
<211> 16
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: probe
<400> 82
ttgacaagaa tcctca
                                                                    16
<210> 83
<211> 18
<212> DNA
<213> Artificial Sequence
*223> Description of Artificial Sequence: amplification primer
<400> 83
gatocccaac ctccaatc
                                                                    18
```

```
<2105 84
<211> 20
<110> DNA
<213: Artificial Sequence
<2235 Description of Artificial Sequence: amplification primer</pre>
<400> 84
cagcgataac caggacaaat
                                                                     20
<210> 85
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: probe
actcaccaac ctcctgtcct cca
                                                                     23
<210> 86
<211> 20
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 86
                                                                     20
acttctttcc ttccgtcaga
<210> 87
<211> 19
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 87
                                                                     19
aaggetteee gatacagag
<210> 88
<211> 22
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: probe
<400> 88
gatetectag acacegeete gg
                                                                     22
<210> 89
<211> 20
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> Description of Artificial Sequence: amplification primer
<400> 89
cagccaacca ggtaggagtg
                                                                    20
<210> 90
<211> 18
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: amplification primer
<400> 90
                                                                    18
ccgtgtggag gggtgaac
<210> 91
<211> 17
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: probe
<400> 91
                                                                    17
ggagcattcg ggccagg
<210> 92
<211> 10
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: probe
<400> 92
tccaggaccc
                                                                10
<210> 93
<211> 61
<212> DNA
<213> HCV
<400> 93
ggtactgcct gatagggtgc ttgcgagtgc cccgggaggt ctcgtagacc gtgcaccatg 60
<210> 94
<211> 61
<212> DNA
<213> HGBV-B
<400> 94
cgtactgcct gatagggtcc ttgcgagggg atctgggagt ctcgtagacc gtagcacatg 60
                                                         51
```

<210> 95

<211> 59 <212> DNA <213> HGBT

<400> 95 gtactgcctg atagggtcct tgcgagggga tctgggagtc tcgtagaccg tagcacatg 59

.